

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to FIGS. 2 and 3. This sheet, which includes FIGS. 1-6, replaces the original sheet that included FIGS. 1-6. In FIG. 2, as requested by the Examiner, depression 26 is shown in the packages 20, and tab 24 is shown in the support 11. FIG. 3 has been amended to show reference numeral 31.

REMARKS

At the time the current Final Official Action was mailed, the Examiner rejected claims 33-45. By this paper, Applicants have amended claim 33 for clarification of certain features to expedite allowance of the present application. Additionally, Applicants have added new claims 68-74. The new claims and amendments do not add any new matter. Upon entry of these amendments, claims 33-45 and 68-74 will be pending in the present application and are believed to be in condition for allowance. In view of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration and allowance of all pending claims.

Objection to the Drawings

In the Office Action, the Examiner objected to the drawings for failing to show every feature of the invention specified in the claims. Specifically, the Examiner stated that “the depression in the packages and tabs in the support must be shown or the feature(s) canceled from the claim(s).” Although Applicants do not necessarily agree with the Examiner’s objection, Applicants have amended the drawings as provided on the attached Replacement Sheet(s). In view of this amendment, Applicants respectfully request the Examiner withdraw the objection to the drawings.

Rejections under 35. U.S.C. § 102

The Examiner rejected claims 33-35 and 38 under 35 U.S.C. § 102 as being anticipated by Taniguichi et al. (US 5,684,675, hereinafter “Taniguchi). Specifically, the Examiner stated:

2. Claims 33-35, 38 are rejected under 35 U.S.C. 102(a) as being anticipated by Taniguchi et al.

Taniguchi et al. discloses an electrical device 1 comprising a plurality of IC packages 2 electrically connected to the surface 7, a support 3 engaged with each IC package contacting their upper end and opposite side surfaces preventing their movement relative to the surface (col. 4, lines 39-42), the support is made of a heat conducting material providing heat transfer from IC packages (col. 5, lines 42—48).

Applicants respectfully traverse this rejection. Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under Section 102, a single reference must teach each and every element or step of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Thus, if the claims recite even one element not found in the cited reference, the reference does not anticipate the claimed invention.

Applicants assert that Taniguchi fails to disclose every element of independent claim 33. For example, independent claim 33, as amended, recites “wherein said *support is secured to said surface.*” (Emphasis added). In sharp contrast, Taniguchi discloses a semiconductor device unit in which a holder is not secured to a surface or substrate. *See* Taniguchi, FIG. 3. As can be seen in FIGS. 1 and 3 of Taniguchi, the holder 3 rests above the substrate 7 and allows the leads 5 of the semiconductor devices 2 to extend downwardly from within the holder 3. *See id.*, col. 4 lines 35-46. Thus, in contrast to the subject matter recited in claim 33, the holder 3 of Taiguchi is not

screwed to the surface. In view of this difference, Applicants believe that claim 33, and the claims that depend therefrom, are in condition for allowance. Therefore, Applicants respectfully request allowance of independent claims 33 and dependent claims 34-35 and 38.

Rejections under 35 U.S.C. § 103

The Examiner rejected claims 36, 37, 39, 40, and 43-45 under 35 U.S.C. § 103(a) as being unpatentable over Taniguchi et al. Specifically, the Examiner stated:

Taniguchi et al. disclose the claimed invention except resilient, conformable, foam and foam with heat conductive particles materials. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use all claimed materials, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Taniguchi et al. provides that any combination of materials can be used for the support 3 (col. 6, lines 17-23) and any grease, adhesive or lubricant can be used between the IC package and the support to ensure contiguous contact.

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Further, the Examiner rejected claims 41 and 42 under 35 U.S.C. §103(a) as being unpatentable over Taniguchi et al. in view of Jefferies et al., or, alternatively, in view of Cotues et al. Specifically, the Examiner stated:

5. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. in view of Jeffries et al., or, alternatively, in view of Cotues et al. Taniguchi et al. disclose the claimed invention except extending tabs and support being directly connected to the surface. Jeffries et al. disclose a support being connected to the surface and having tab/notch arrangement to be engaged with an electronic device. Cotues also discloses the support arrangement including notches in the heat sink (see Fig. 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use arrangement disclosed by Jeffries et al. in the structure disclosed by Taniguchi et al. in order to further stabilize the IC packages relative to the surface.

Office Action, p. 4.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

First §103(a) Rejection

Claims 36, 37, 39, 40, and 43-45 are dependent on claim 33. As discussed above with reference to the rejections under 35 U.S.C. § 102(b), Taniguchi does not disclose securing the support to a surface as recited in independent claim 33. Thus, Taniguchi does not disclose or suggest all of the elements of the claimed invention and cannot render the claimed subject matter obvious. Accordingly, Applicants respectfully request withdrawal of the Examiner's rejection and allowance of claims 36, 37, 39, 40, and 43-45.

Second §103(a) Rejection

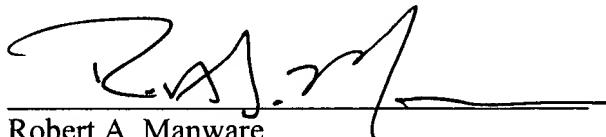
Claims 41 and 42 are dependent on claim 33. As discussed above with reference to the rejections under 35 U.S.C. § 102(b), Taniguchi does not disclose securing the support to a surface as recited in independent claim 33. The cited references do nothing to obviate the deficiencies of the primary reference discussed above with regard to the base claim. Thus, the cited combination does not disclose or suggest all of the elements of the claimed invention, and thus, cannot render the claimed subject matter obvious.

Further, Applicants respectfully assert that neither Jeffries nor Cotues disclose the features additionally recited in claim 41. For example, claim 41 recites “wherein said support includes outwardly extending tabs arranged to engage said depression in said package.” In contrast, Jeffries discloses a frame plate 28 with a notch 40 that is used to hold a daughter board 14. *See* Jeffries, col. 3, line 65-66. There are no tabs or depressions in the frame plate and daughter board system, respectively, as disclosed in Jeffries. Further, Cotues discloses an arrangement in which electronic devices are stacked at a non-orthogonal angle with respect to a substrate. *See* Cotues, col. 2, lines 60-68. In one embodiment, Cotues discloses stacked electronic devices that engage a groove 35 in the surface of a heat sink 38. There are no tabs or depressions in the electronic devices or heat sinks, respectively. For these additional reasons, Applicants respectfully request withdrawal of the Examiner’s rejection and allowance of claims 41 and 42.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request reconsideration of the Examiner's rejections and allowance of all pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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